

# INTERNATIONAL SEARCH REPORT

International application No

PCT/US2005/019805

C37

## A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D401/12 C07D405/12 C07D409/12 C07D471/04 C07D498/04  
A61K31/551 A61K31/5365 A61K31/4375 A61K31/443 A61K31/4436  
A61K31/4439 A61P31/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| P,X       | WO 2004/082586 A (AFFINIUM PHARM INC [CA])<br>30 September 2004 (2004-09-30)<br>the whole document<br>-----   | 1-4,<br>10-39         |
| P,X       | WO 2004/052890 A (AFFINIUM PHARM INC [CA];<br>BERMAN JUDD [CA]; SAMPSON PETER [CA];<br>PAULS H) 24 June 2004 (2004-06-24)<br>the whole document<br>-----  | 1-4,<br>10-39         |
| Y         | WO 03/088897 A (AFFINIUM PHARM INC [CA];<br>BURGESS WALTER J [US]; JAKAS DALIA [US];<br>HUFF) 30 October 2003 (2003-10-30)<br>the whole document<br>----- | 1-4,<br>10-39         |
| Y         | WO 01/27103 A (SMITHKLINE BEECHAM CORP<br>[GB]; MILLER WILLIAM H [US]; NEWLANDER<br>KENNETH) 19 April 2001 (2001-04-19)<br>the whole document<br>-----    | 1-4,<br>10-39         |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

3 April 2007

Date of mailing of the international search report

14/06/2007

Name and mailing address of the ISA/

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 33-37 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see annex

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3 (part); 4; 10-39 (part)

Compounds of formula (I) with the 1st mentioned substituent R, and related claims.

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2. claims: 1-3 (part); 5; 10-39 (part)

Compounds of formula (I) with the 2nd mentioned substituent R, and related claims.

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3. claims: 1-3 (part); 6; 10-39 (part)

Compounds of formula (I) with the 3rd mentioned substituent R, and related claims.

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4. claims: 1-3 (part); 7; 10-39 (part)

Compounds of formula (I) with the 4th mentioned substituent R, and related claims.

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5. claims: 1-3 (part); 9; 10-39 (part)

Compounds of formula (I) with the 5th mentioned substituent R, and related claims.

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6. claims: 1-3 (part); 8; 10-39 (part)

Compounds of formula (I) with the 6th mentioned substituent R, and related claims.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2005/019805

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s)  | Publication<br>date  |
|---|---|---------------------|---|--|
| WO 2004082586                             | A | 30-09-2004          | CA 2519429 A1<br>EP 1608377 A2<br>JP 2006523207 T   | 30-09-2004<br>28-12-2005<br>12-10-2006   |
| WO 2004052890                             | A | 24-06-2004          | AU 2003298937 A1<br>CA 2508792 A1<br>EP 1575951 A1<br>JP 2006513262 T   | 30-06-2004<br>24-06-2004<br>21-09-2005<br>20-04-2006   |
| WO 03088897                               | A | 30-10-2003          | AU 2002367773 A1<br>CA 2444597 A1<br>EP 1560584 A2<br>JP 2005519984 T   | 03-11-2003<br>06-10-2002<br>10-08-2005<br>07-07-2005   |
| WO 0127103                                | A | 19-04-2001          | AT 285821 T<br>AU 773218 B2<br>AU 7874700 A<br>BR 0014470 A<br>CA 2387016 A1<br>CN 1378542 A<br>CZ 20021167 A3<br>DE 60017180 D1<br>DE 60017180 T2<br>EP 1226138 A1<br>ES 2231275 T3<br>HU 0203122 A2<br>JP 2003511448 T<br>NO 20021638 A<br>NZ 517706 A<br>PL 354892 A1<br>TW 534909 B<br>ZA 200202631 A | 15-01-2005<br>20-05-2004<br>23-04-2001<br>24-09-2002<br>19-04-2001<br>06-11-2002<br>12-06-2002<br>03-02-2005<br>08-12-2005<br>31-07-2002<br>16-05-2005<br>28-01-2003<br>25-03-2003<br>05-06-2002<br>30-01-2004<br>22-03-2004<br>01-06-2003<br>20-03-2003 |